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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,674	07/31/2001	Dally Moya	003780-059	1178

7590 10/02/2002

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ZALUKAEVA, TATYANA

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1713

8

DATE MAILED: 10/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Appli ation No.	Applicant(s)	
	09/917,674	MOYA ET AL.	
	Examiner Tatyana Zalukaeva	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 31 July 2002.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-19 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 5.
- 4) Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The structure recited as "A" in claim 1, line 5 cannot exist since the valence of carbon as presented is 6, which contradicts to the principles of organic chemistry.

Claims 2-19 are rejected as being dependent on claim 1.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "in particular, or preferably" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74

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(Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation aromatic polyester, and the claim also recites "in particular, a repetition units of PET and/or PEN", claim 1, line 7 and line 16 on page 19, which is the narrower statement of the range/limitation. The same applies to a limitation defined by the word "preferably" as per claim 1, line 12, as well as to claim 7, line 2, "preferably" and "more preferably", as per claims 8, 12

The recited "optional" substitution for group R<sub>2</sub> as well as for R<sub>3</sub> as per claim 1 does not leave the "room" for any real groups to present R<sub>2</sub>. It is not clear if R<sub>3</sub> itself is present or it is optional.

The language of Claims 2, 9 and is indefinite because it uses an improper form of a Markush Group for component R<sub>6</sub> (as per claim 2) and groups wherefrom the alcohol is selected as per claim 9. When groups recited in a claim are so related as to constitute a proper Markush group, they should be recited in the conventional manner or in the alternative, for example, "... selected from the group, consisting of A, B, C and D".

Claim is indefinite if undue experimentation is involved to determine boundaries of protection. This rationale is applicable to binder "obtainable" by a stated process, as per claims 4, 11 and "preparable" as per claims 7, 8 because any variation in any parameter within the scope of the claimed process would change the polymer produced. One who made or used a polymer made by a process other than the process cited in the claim would have to produce a polymer using all possible parameters within the

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scope of the claim, and then extensively analyze each product to determine if this polymer was obtainable by a process within the scope of the claimed process. Consult Ex parte Tanksley, 26 USPQ 2d 1389.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Rao et al U.S. 5,252,615.

Rao: discloses a coating composition derived from the alcoholysis of polyethylene terephthalate (PET) (abstract). PET resin having a structure presented by Fig.1 in col. 2 is digested into lower molecular weight polymeric units through alcoholysis reaction, and further this product of alcoholysis reacts with an acid functional reactant (col. 2, lines 15-20). Alcohols for use in an alcoholysis reaction of PET are saturated and unsaturated polyols, listed in col. 4, lines 40-61, polyether polyols, listed in col. 4, lines 62-68, col. 5, lines 1-5. After alcoholysis the reaction product undergoes further reactions, to produce a polyester suitable for coating composition (col. 6, lines 45-50). Particularly discussed are reactions with acids and anhydrides (col. 6, lines 51-53). Described acid functional materials are those having one carboxyl groups and

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those having two carboxyl groups (col. 6, lines 63-68). **Unsaturated carboxylic acids** are of particular attention as reactants with hydroxyterminated polyester of PET. These acids include palmitic, oleic, linoleic, linolenic, etc. (e.g. higher unsaturated acids). (see col. 7, lines 5-16). In a preferred embodiment, products of esterification of the alcoholysis process can be further modified by direct acrylic modification. Direct acrylic modification is typically conducted under conditions also well known in the art, including the procedures taught in U.S. Pat. Nos. 4,735,995 and 4,873,281. (paragraph bridging columns 8 and 9).

When acrylically modifying the low acid value products, the incorporation of a high level of acid-functional acrylic materials will enable the final, acrylic-modified coating product to be reducible in water or other aqueous systems. (col. 9, lines 15-3). The composition can also contain additives such as flow agents, catalysts, diluents, solvents, UV light absorbers, etc (col. 8, lines 40-45).

Therefore all the limitations of the instant claims are met by the disclosure of Rao.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

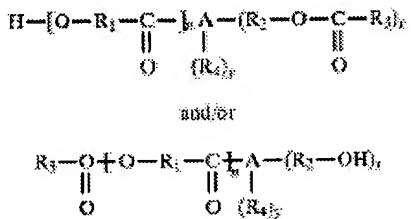
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerber et al (U.S. 5,877,255) in view of EP 0 514 147.

Gerber discloses a binder produced by a reaction of aromatic polyesters with polyols with subsequent esterification of the products with fatty acids, such binders are [particularly suitable for polyurethanes. (abstract). The reaction product of a polyester (PET) and diol or polyoil or aminoalcohol is presented by formulas (I) and (II) in col. 4

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A preferred binder is one obtained from a polyethyleneterephthalate (col. 6, lines 11-20)

The meaning of all substitute groups make them identical to the alcoholysis products of PET and polyols of the instant claims. The after-esterification process is preferably performed with dicarboxylic acid, such as adipic acid (col. 6, lines 20-31).

The disclosure of Gerber differs from the instant claims by disclosing an "after-esterification process" with dicarboxylic acids, compare to (meth)acrylic acid of the instant claims.

EP'147 discloses an adhesive composition comprising a **polyester acrylate** (abstract). Hydroxyl terminated polyesters are derived from a reaction of a dihydric alcohol and dicarboxylic acid anhydride (PET, for example), col. 5-10. After that they can react with carboxyl reactive acrylic compound, such as hydroxyalkyl acrylates and methacrylates.

Based on the same application of Gerber's and EP'147 composition, as well as on the identity of the hydroxyterminated polyester of PET, produced by analogous reaction of alcoholysis, a person skilled in the art would have found it obvious to esterify the products of Gerber with acrylates, as suggested by EP'147 in order to enable the final, acrylic-modified coating product to be reducible in water or other aqueous systems, and thus to arrive at the instantly claimed subject matter.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tatyana Zalukaeva whose telephone number is (703) 308-8819. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

TATYANA ZALUKAEVA  
PATENT EXAMINER



September 10, 2002

Tatyana Zalukaeva  
Examiner  
Art Unit 1713